

CLAIMS

1. A vehicle-mounted structure of a heat exchanger characterized in that the heat exchanger having the dual function as a reinforcing member for reinforcing the vehicle body is mounted on a vehicle.

2. A vehicle-mounted structure of a heat exchanger characterized in that beam-like brackets extending transversely across the vehicle are included in the heat exchanger, and the heat exchanger is mounted on the vehicle through the brackets.

3. A heat exchanger mounted on a vehicle, characterized by comprising  
a plurality of tubes for passing a fluid therethrough,  
header tanks arranged at the longitudinal ends, respectively, of the tubes and communicating with a plurality of the tubes, and  
beam-like brackets mounted on said header tanks, extending in horizontal direction and fixed on the vehicle.

4. A heat exchanger mounted on a vehicle, comprising:  
a first heat exchanger including a plurality of first tubes for passing a first fluid therethrough and first header tanks arranged at the longitudinal ends, respectively, of the first tubes for communicating with a plurality of the first tubes thereby to exchange heat between the air and the first fluid; and  
a second heat exchanger including a plurality of second tubes for passing a second fluid therethrough and second header tanks arranged at the longitudinal ends, respectively, of the second tubes for communicating with a plurality of the second tubes thereby to exchange heat between the air and the second fluid;

characterized in that the two heat exchangers are arranged integrally in series with each

other along the direction of air flow, and a beam-like bracket extending in horizontal direction and fixed on the vehicle is coupled to or integrated with at least each of said first header tanks.

- 5           5. A heat exchanger mounted on a vehicle, comprising:

                  a plurality of tubes for allowing a fluid to flow therethrough;

- 10                   a header tank arranged at each of the longitudinal ends of the tubes and extending in the direction perpendicular to the length of the tubes while communicating with a plurality of said tubes; and

- a beam-like bracket arranged on each of said head tanks and extending in horizontal direction  
15                   thereby to be fixed on the vehicle;

                  characterized in that said header tanks are each formed with a reinforcing wall projected in the direction perpendicular to the length of the header tanks and extending longitudinally of the header tanks.

- 20           6. A heat exchanger as described in claim 3, characterized in that said brackets are each formed with an assembling portion for assembling equipment other than the heat exchanger.

- 25           7. A heat exchanger as described in claim 4, characterized in that said brackets are each formed with an assembling portion for assembling equipment other than the heat exchanger.

- 30           8. A heat exchanger as described in claim 5, characterized in that said brackets are each formed with an assembling portion for assembling equipment other than the heat exchanger.

9. A heat exchanger as described in claim 3, characterized in that said brackets are each formed with an assembling portion for assembling the headlight.

- 35           10. A heat exchanger as described in claim 4, characterized in that said brackets are each formed with an assembling portion for assembling the headlight.

12. A heat exchanger as described in claim 6, characterized in that said brackets are of two types, one formed with the assembling portion and the other not formed with the assembling portion.

14. A heat exchanger as described in claim 8,  
characterized in that said brackets are of two types, one  
formed with the assembling portion and the other not  
formed with the assembling portion.

16. A heat exchanger as described in claim 13, characterized in that the two types of brackets and the assembling portion are integrated with each other.

18. A heat exchanger as described in claim 9, characterized in that said brackets are of two types, one formed with the assembling portion and the other not formed with the assembling portion.

20. A heat exchanger as described in claim 11, characterized in that said brackets are of two types, one formed with the assembling portion and the other not formed with the assembling portion.

21. A heat exchanger as described in claim 18.

characterized in that the two types of brackets and the assembling portions are integrated with each other.

22. A heat exchanger as described in claim 19,  
characterized in that the two types of brackets and the  
5 assembling portions are integrated with each other.

23. A heat exchanger as described in claim 20, characterized in that the two types of brackets and the assembling portions are integrated with each other.

**Figure 1.** The effect of the number of iterations ( $n$ ) on the accuracy of the proposed algorithm. The figure shows two plots side-by-side. The left plot shows the error norm  $\|e\|_2$  versus  $n$ , and the right plot shows the relative error  $\frac{\|e\|_2}{\|x\|_2}$  versus  $n$ . Both plots show a decreasing trend as  $n$  increases from 0 to 1000. The left plot has a logarithmic y-axis ranging from  $10^{-16}$  to  $10^0$ . The right plot has a linear y-axis ranging from 0 to 0.0008. Both plots have an x-axis ranging from 0 to 1000.